

### REMARKS

Claims 1-8 and 10-13 remain pending in this application. Claims 1-8 and 10-13 are rejected. Claims 9 and 14-18 are previously cancelled. Claim 10 is amended herein to address a matter of form unrelated to substantive patentability issues, namely, to insure proper antecedent basis.

Applicants herein traverse and respectfully request reconsideration of the rejection of the claims cited in the above-referenced Office Action.

Claims 1-8 and 12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Dasser (DE 14 78 857 A1). Applicants herein respectfully traverse these rejections. "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). It is respectfully submitted that the cited reference is deficient with regard to the following.

Independent claim 1 recites in pertinent part the following:

a piston driving mechanism for driving the  
piston member between a first position corresponding  
to the clamping position of the clamping rod and a  
second position corresponding to the clamp release  
position of the clamping rod, the piston driving

mechanism being provided with a spring for urging the piston member to the first position corresponding to the clamping position of the clamping rod and with a hydraulic chamber for driving the piston member to the second position corresponding to the clamp release position of the clamping rod by hydraulic pressure; and

a cam mechanism for driving the engagement portion of the clamping rod in a clamping direction roughly rectangular to the longitudinal direction of the clamping rod by a driving force of the piston driving mechanism driving the piston member to the first position.

It is respectfully submitted that the cited Dasser reference lacks any teaching directed to the claimed recitation of a "a spring for driving the piston member to the first position corresponding to the clamping position of the clamping rod."

In applicants' prior responsive amendment, filed September 28, 2009, the functioning of the device of Dasser, and its structural elements for performing such functions, were detailed for the Examiner, in order to highlight the clear distinctions of the claimed features over the disclosure of the cited Dasser reference. However,

in the Response to Arguments on page 4 of the final Office Action, the Examiner simply states that the “rejection, which is USC 102(b), considers the presence of the elements.” Such statement is merely conclusory, being wholly unsupported by the facts demonstrated clearly in applicants’ analysis of the structure of Dasser, which is repeated, in substance, below.

Figs. 2, 3 and 4 of Dasser sequentially diagram the operational progression of the device disclosed therein. Beginning in Fig. 2, the device is shown in an initial state, before being energized for performing a clamping operation. As subsequently shown in Fig. 3, pressurized air (pneumatic pressure) is introduced through the right opening “C,” causing the piston 2 to move to the left, and correspondingly to move the clamping arm 3 into the opening of the workpiece. In this not-yet-clamped position, the articulated piston 6 is maintained in a pressed state against a stop ring 7 located at a forward end of the piston 2 by a spring 4. The sole purpose of the spring 4 in Dasser, in stark contrast to the claimed invention, is therefore simply to maintain the unclamped orientation of the clamping arm 3 in Fig. 3, by resisting relative movement between the articulated piston 6 and the piston 2, within which the former is slidably received. Note, that in both Figs. 2 and 3, no movement can occur between the articulated piston 6 and the piston 2 because of the spring 4, and hence the unclamped orientation of the clamping arm, up to this point, is assured.

The clamping arm 3 has a widened shoulder at a portion thereof maintained inside of the body 1, which comes into engaged contact with the ball adapter 5

(serving as a rotatable ball joint), thereby preventing further forward movement of the clamping arm past that shown in Fig. 3.

Further movement of the piston 2 to the left causes the articulated piston 6 to be urged against the spring 4, compressing the spring 4 in response to the relative movement of the articulated piston 6 and the piston 2, thereby lifting the articulated piston 6 from contact with the stop ring 7. Because of the tilt of the bore of the piston 2, within which the articulated piston 6 is received, as the pneumatic pressure C is continued, the clamping arm is rotated about the ball adapter 5, so as to be brought into a clamping position shown in Fig. 4. Ball adapter 5 therefore operates as a rotatable joint, simply allowing pivoting of the clamping arm 3 as it is tilted by continued movement of the piston 2 urged by pneumatic pressure operating against the spring 4.

Thus, it should be abundantly clear that the spring 4 of Dasser operates in a manner resisting movement of the clamping arm 3 in a direction of clamping brought about by reason of the pneumatic pressure C, rather than the exact opposite as claimed, i.e., “urging the piston member to the first position corresponding to the clamping position of the clamping rod” as claimed.

While not completely understood, it would appear, from the Examiner’s statement that the piston driving mechanism is “provided with a spring for elastically energizing the piston member away from the clamping object of the clamping position” (see bottom of page 2, emphasis added), that the Examiner agrees with

applicants' analysis, i.e., that the spring of Dasser elastically energizes the piston member in a direction releasing the clamping effect. Indeed, viewing Fig. 4 of Dasser, if the pneumatic pressure C were to be eliminated, the spring 4 would urge the piston 2 to the right, thereby releasing the clamping arm from a clamped state, which is precisely opposite to the structural arrangement of the claimed invention.

It is only the pneumatic pressure C that operates to drive the piston 2 to a position farther left, and which thereby brings about a clamping operation of the clamping arm 3 by causing a tilting thereof by pivoting about the ball adapter 5. The spring does nothing to urge the piston to a "position corresponding to the clamping position of the clamping rod." This is abundantly clear when one considers what effect removal of the spring entirely from Fig. 4 would have on the clamping force of clamping arm 3. The answer is, that clamping force would actually be increased by removal of the spring 4, since no spring force resisting further movement of the piston 2 to the left by pneumatic pressure C would remain. Consequently, the Examiner's equating of the spring 4 of Dasser is clearly misplaced, since the Dasser disclosure does not meet the claim recitation requiring "a spring for urging the piston member to the first position corresponding to the clamping position of the clamping rod. "

In view of the above, it is respectfully submitted that claim 1 particularly describes and distinctly claims elements not disclosed in the cited reference.

Therefore, based on the foregoing, reconsideration of the rejections of claims 1-8 and 12 and their allowance are respectfully requested.

Claims 1, 2, 4, 6, 8 and 10-13 are rejected as obvious over Yonezawa (US 6,095,509) in view of Kohlert (US 5,746,420) under 35 U.S.C. §103(a). The applicants herein respectfully traverse this rejection. For a rejection under 35 U.S.C. §103(a) to be sustained, the differences between the features of the combined references and the present invention must be obvious to one skilled in the art.

It is respectfully submitted that the cited Yonezawa reference is devoid of teaching directed to a "a spring for urging the piston member to the first position corresponding to the clamping position of the clamping rod ." The spring 27 in Yonezawa does not urge the collet 13 into a clamping position, but rather, just the opposite. This is highlighted at col. 5, lines 39-44 of Yonezawa, which passage states that "the collet 13 slightly descends by a stroke (M) against the push spring with a downward driving force of the pull rod 12." (emphasis added). Thus, it is the pull rod, and not the spring 27, that provides the drive force, and the spring instead provides resistance against this clamping force. The reference is clear that the purpose of the spring 27 is to provide an exactly opposite function to that of the claimed invention, i.e., to maintain an unclamped condition, as stated unequivocally at col. 2, lines 9-13.

Furthermore, applicants respectfully submit that Yonezawa fails to teach or suggest clamping by "driving the engagement portion of the clamping rod in a

clamping direction roughly rectangular to the longitudinal direction of the clamping rod” as claimed. Rather, in contrast with this claimed feature, when clamping, the collet 13 expands while being moved downward by stroke (M), and is therefore displaced vertically in a direction of the movement of the pull rod 12.

Despite the fact that applicants presented, in substance, the above arguments in their prior response, the Examiner’s Response to Arguments in the final Office Action completely ignores these bases for arguing against the rejections. Rather, the Examiner again makes a conclusory statement that “Yonezawa discloses the claimed features except for the cam” without pointing out what he believes are the alleged deficiencies in applicants’ arguments. Furthermore, in this same regard, the Examiner avers that “Yonezawa discloses equivalent elements that function in a manner that produce the expected results” associated with a “spring for urging the piston member” without any substantiation or support by reference to specific disclosure in Yonezawa that would counter the applicants’ analysis repeated above.

Applicants’ argument regarding Kohlert was simply to state that the secondary reference fails to supplement the teachings clearly lacking in the primary Yonezawa reference, as demonstrated above, and thus, a *prima facie* case of obviousness, which requires that the proffered combination of references discloses each and every claimed element, has not been established.

Thus, it is respectfully submitted that the rejected claims are not obvious in view of the cited references for the reasons stated above. Reconsideration of the

rejections of claims 1, 2, 4, 6, 8 and 10-13 and their allowance are respectfully requested.

No fee is believed due. If there is any fee due the USPTO is hereby authorized to charge such fee to Deposit Account No. 10-1250.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,  
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